

Cuddington Primary School

Science Essential Learning, Assessment and Skills Progression



CUDDINGTON
Primary School



Respect Collaborate Aspire

Creating Success Together

Science Essential Learning and Assessment Questions

The programmes of study for science are set out year-by-year for key stages 1 and 2. Schools are, however, only required to teach the relevant programme of study by the end of the key stage. Within each key stage, schools therefore have the flexibility to introduce content earlier or later than set out in the programme of study. In addition, schools can introduce key stage content during an earlier key stage if appropriate. All schools are also required to set out their school curriculum for science on a year-by-year basis and make this information available online.

Our Science curriculum is structured around key disciplinary concepts, including **scientific knowledge, working scientifically, enquiry, observation, and evaluation**. These concepts underpin learning and are revisited from Reception to Year 6, enabling pupils to build a secure and connected understanding of the natural world over time.

Through this progression, pupils develop knowledge across the substantive areas of **biology, chemistry, and physics**, while learning how scientists work through observation, questioning, testing, and reasoning.

Practical enquiry is central to the curriculum. Pupils are encouraged to ask questions, carry out investigations, gather evidence, and communicate findings using accurate scientific vocabulary.

By revisiting key concepts and developing disciplinary skills, pupils think increasingly like scientists, able to question, investigate, analyse evidence, and explain the world around them with accuracy and confidence.

Reception		
Essential Learning		
Explore the natural world around them, making observations and drawing pictures of animals and plants.	Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.
The Big Question		

I can ... - identify signs of Autumn in the outdoor and school environments. - play and explore outside in different seasons and weathers. I know ... - what animals live in the forest? - what different habitats are in the forest?	I can ... - identify signs of Winter in the outdoor and school environments. - identify signs of Spring in the outdoor and school environments. - play and explore outside in different seasons and weathers. I know ... - what happens when water melts and freezes. - what a life cycle is – eggs and chicks (incubate, grow, hatch)	I can ... - identify signs of Winter in the outdoor and school environments. - play and explore outside in different seasons and weathers. I know ... - that animals and plants live and grow around us. - that there are different habitats for different minibeasts in our school grounds. - that there are different animals in different environments.
Assessment Questions		
- What season is it? - What happens in Autumn? - Which animals live in the forest? - Where do they live?	- What season is it? - What happens in Winter? - What happens/ed when Spring arrives? - How did I make this ice cube? - What is going to happen to my ice cube now?	- What season is it? - What happens in Summer? - What lives in our school grounds? - Where will we find them? - What fish/animals live near us which live far away?
Essential Vocabulary		
Tier 1: - Season - Weather	Tier 1: - Winter - Spring - grow - melt - freeze	Tier 1: - animals - plants - live - grow
Tier 2: Autumn	Tier 2: life cycle	Tier 2: environment
Tier 3: Habitat	Tier 3: - incubate - hatch	Tier 3: minibeasts

Year One		
Essential Learning		
Plants	Everyday materials	Animals including humans
The Big Question		
I can ... - identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. ✓ Oak, sycamore, holly, pine, daisy, dandelion - identify and describe the basic structure of a variety of common flowering plants, including trees. ✓ Leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches and a stem	I can ... - distinguish between an object and the material from which it is made - identify and name a variety of everyday materials, including wood, metal, plastic, glass, metal, water, paper, cardboard, brick and rock - describe the simple physical properties of a variety of everyday materials - compare and group together a variety of everyday materials on the basis of their simple physical properties. ✓ hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent; opaque/transparent? - Recognise which squash, bend, twist and stretch?	I can ... - identify and name a variety of common animals including fish (clown fish and salmon), amphibians (frog and newt), reptiles (grass snake and common lizard), birds (blackbird and blue tit) and mammals (dogs, squirrel and rabbit). - identify and name a variety of common animals that are carnivores, herbivores and omnivores - describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) - identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. (head, neck, arms, elbows, legs, knees, face, ears, wrist, ankles, hop eyes, hair, mouth, teeth)
Assessment		
- What are the different parts of a plant and what do they do? - What happened when we planted flowers and vegetables from seed? - What common flowers and trees can be found in my school grounds? I can observe closely (magnifying glasses, photographs), and comparing and contrasting familiar plants; describing how they were	- What are the properties of these materials? - Which is manmade and which is natural? I can perform simple tests to explore questions, for example: 'What is the best material for an umbrella? ...for lining a dog basket? ...for curtains?	- What type of animals are these and how do we know? - What are the main body parts? I can use my observations to compare and contrast animals at first hand or through videos and photographs, grouping animals according to what they eat; and using their senses to compare different textures, sounds and smells

able to identify and group them, and drawing diagrams		
Essential Vocabulary		
Tier 1: • leaves • flowers (blossom) • fruit • roots • seed • trunk • branches • stem	Tier 1: • wood • metal • plastic • glass • water • paper • cardboard • brick • rock • hard / soft • shiny / dull • rough / smooth • bendy / not bendy • squash • bend	Tier 1: • head • neck • arms • elbows • legs • knees • ankles • hips • face • ears • eyes • hair • mouth • teeth • dogs • squirrel • rabbit
Tier 2: • petals • bulb	Tier 2: • stretchy / stiff • waterproof / not waterproof • absorbent / not absorbent • opaque / transparent	Tier 2: • fish • amphibians • reptiles • birds • mammals
Tier 3: • Oak • Sycamore • Holly • Pine • Daisy • Dandelion	Tier 3: • twist • stretch	Tier 3: • clown fish • salmon • frog • newt • grass snake • common lizard • blackbird • blue tit

Year Two

Essential Learning

Plants		Living things and their habitats.		Animals including humans	
The Big Question					
How does a plant grow?		Why do animals choose to live in their homes?		What do we need to survive?	
I can ... - observe and describe how seeds and bulbs grow into mature plants. - find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.		I can... - explore and compare the differences between things that are living, dead, and things that have never been alive - identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other - identify and name a variety of plants and animals in their habitats, including microhabitats - describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.		I know ... - notice that animals, including humans, have offspring, which grow into adults - find out about and describe the basic needs of animals, including humans, for survival (water, food and air) - describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	
Retrieval – Use of everyday materials		One off lesson to recap Year 1 learning with a focus on properties of materials that make them suitable or unsuitable for particular purposes and they should be encouraged to think about unusual and creative uses for everyday materials. Find out about Charles Macintosh, what did he develop and how is it used.			
Assessment Questions					
- What do plants need for germination, growth and survival? - Can you explain the life cycle of a plant? I have planted a bulb and a seed, observing it at different stages of growth and drawn and labelled it.		- What keeps us alive and healthy? - What is a habitat? - What is a microhabitat? - Which are living, dead or were never alive? - What is a food chain?		- What stages does an animal go through as it grows? - What stages do humans go through as they grow into adults? - What do animals need for survival? - What do humans need to stay healthy?	

I have set up a comparative test to show that plants need light and water to stay healthy.		I have, through first-hand observation and measurement , watched how an animal grow and change.
Essential Vocabulary		
Tier 1: - mature plants - suitable temperature	Tier 1: - living - dead - animals - plants - basic needs	Tier 1: - water - food - air - exercise - hygiene
Tier 2: - seeds - bulbs (<i>retrieval from Year 1</i>) - water - light - grow - stay healthy	Tier 2: - habitats - sources of food	Tier 2: - offspring - adults
Tier 3:	Tier 3: - Microhabitats - simple food chain	Tier 3:

Year Three				
Essential Learning				
Plants	Rocks	Light	Forces and magnets	Animals including humans
The Big Question				
How do plants grow and reproduce?	What are rocks?	How do I see things?		Why is a balanced diet important?
I can ... identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and	I can ... compare and group together different kinds of rocks on the basis of their appearance and simple physical properties	I can ... recognise that I need light in order to see things and that dark is the absence of light	I can ... - compare how things move on different surfaces - notice that some forces need contact between two	I can ... identify that animals, including humans, need the right types and amount of nutrition, and that they cannot

<i>flowers. (retrieval from Year 1)</i> - explore the requirements of plants for life and growth (air, light, water, nutrients, from soil, and room to grow) and how they vary from plant to plant. <i>(partial retrieval from Year 2)</i> - investigate the way in which water is transported within plants. - explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	- describe in simple terms how fossils are formed when things that have lived are trapped within rock - recognise that soils are made from rocks and organic matter.	- notice that light is reflected from surfaces - recognise that light from the sun can be dangerous and that there are ways to protect their eyes - recognise that shadows are formed when the light from a light source is blocked by an opaque object - find patterns in the way that the size of shadows change.	objects, but magnetic forces can act at a distance - observe how magnets attract or repel each other and attract some materials and not others - compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials - describe magnets as having two poles - predict whether two magnets will attract or repel each other, depending on which poles are facing.	make their own food; they get nutrition from what they eat. Balance of good health plate and healthy meals. identify that humans and some other animals have skeletons and muscles for support, protection and movement. (Skull, ribs, pelvis, spine, knee cap, collar bone, ankle, fibula, tibia, radius, ulna, femur)
Assessment Questions				
<i>What are the different parts of a flowering plants and what are their functions?</i> - What does a plant need to live and growth?	- How would you group together different kinds of rocks? - How are fossils formed and what are they?	- What do I need in order to see? - What is dark? - What do I know about the light from the sun? - How are shadows formed?	- How do things move on different surfaces? - Which forces need contact and which don't? - What happens when we put two	- Why is nutrition and a balance diet important? - What would make a healthy meal? - Which main body parts are associated

- How does what they need vary from plant to plant? - How is water transported within a plant? - How do flowering plants reproduce? I have compared the effect of different factors on plant growth, for example, the amount of light or water. I have observed how water is transported in plants.	What is soil made from? I have explored different soils and identify similarities and differences between them and investigated what happens when rocks are rubbed together and what changes occur when they are in water.	Why does the size of a shadow change? I have looked for patterns in what happens to shadows when the light source moves or the distance between the light source and the object changes.	magnets near each other? What happens when we put a magnet near different materials? I have carried out tests to find out how far things move on different surfaces and gathered and recorded data. I have explored the strengths of different magnets and found a fair way to compare them.	with which part of the skeleton? What would happen if humans did not have skeletons? I have researched different food groups and how they keep us healthy and designed a meal based on what I have found out.
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Essential Vocabulary

Tier 1 - air - light Tier 2 - growth - life cycle Tier 3 - nutrients - water is transported (<i>transport in plants</i>) - pollination - seed formation - seed dispersal	Tier 2 - physical properties - organic matter Tier 3 - fossils - soils - rocks	Tier 1 - light - dark - shadows Tier 2 - reflected Tier 3 - opaque	Tier 1 - attract - repel Tier 2 - forces - poles Tier 3 - magnetic forces	Tier 1 - healthy meals - muscles - support - protection - movement - skull - ribs - ankle Tier 2 - nutrition - skeleton - pelvis - spine - kneecap - collar bone Tier 3
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				• Balance of good health plate • fibula • tibia • radius • ulna • femur
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Year Four				
Essential Learning				
Living things and their habitats	States of matter	Sound	Electricity	Animals including humans
The Big Question				
What happens in the world of living things?	How do solids, liquids and gases make up our material world?	How can I hear that sound?	How do we shine the light?	How do our teeth help with how we digest our food?
I can ... • recognise that living things can be grouped in a variety of ways - <i>put vertebrate animals into groups (retrieval from Year 1)</i> and <i>invertebrates into snails and slugs, worms, spiders, and insects</i>. Group plants into <i>flowering plants (including grasses)</i> and <i>non-flowering plants, such as ferns and mosses</i>.	I can ... • compare and group materials together, according to whether they are <i>solids, liquids or gases</i> (solids hold their shape; liquids form a pool not a pile; gases escape from an unsealed container) • observe that some materials <i>change state</i> when they are	I can ... • identify how sounds are made, associating some of them with something <i>vibrating</i> • recognise that vibrations from <i>sounds travel through a medium</i> to the ear • find patterns between the <i>pitch</i> of a <i>sound</i> and features of the	I can ... • identify common appliances that run on <i>electricity</i> • construct a simple series <i>electrical circuit</i>, identifying and naming its basic parts, including <i>cells, wires, bulbs, switches and buzzers</i> • identify whether or not a <i>lamp</i> will	I can ... • describe the simple functions of the basic parts of the <i>digestive system</i> in humans (mouth, tongue, teeth, oesophagus, stomach and small and large intestine) • identify the <i>different types of teeth</i> (molars, incisors and canines) in humans and their simple functions including

- explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment - recognise that environments can change and that this can sometimes pose dangers to living things.	heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) - Water - identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	object that produced it - find patterns between the volume of a sound and the strength of the vibrations that produced it - recognise that sounds get fainter as the distance from the sound source increases.	light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery - recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit - recognise some common conductors and insulators, and associate metals with being good conductors.	- know what damages teeth and how to look after to look after them. - in animals, compare the teeth of carnivores and herbivores. - construct and interpret a variety of food chains, identifying producers, predators and prey.
Assessment Questions				
- How can we group these, (plants and animals) and why have we grouped them this way? - What is a classification key? - What happens to living things when their environment changes? I have used and made simple guides or keys to explore and	- What are the three states of matter? - What happens when some materials are heated or cooled? - What is evaporation? What speeds it up? - What is condensation? - What is the water cycle? I have observed and recorded evaporation over	- How are sounds made? - What is the pitch of a sound? - What changes the volume of a sound? - What happens to sound as it travels? I have found patterns in the sounds that are made by different objects such	- Can you name some appliances that run on electricity? - What are the parts of a simple circuit? - What is needed to make a lamp light? - What are common conductors and name some? - What are common insulators and name some? I have constructed a simple series circuits with different components, for	- What are the different parts of the digestive system? - What do they do? - What different types of teeth do humans have and why? - How can we look after our teeth? - What is a food chain? - What do the words producer, predator and prey mean?

identify local plants and animals.	a period of time, i.e. ice melting.	as saucepan lids of different sizes or elastic bands of different thicknesses.	example, bulbs, buzzers and motors, and including switches. I have drawn the circuit as a pictorial representation .	
Essential Vocabulary				
Tier 1 • snails • slugs • worms • spiders • insects • environment Tier 2 • flowering plants (including grasses) • non-flowering plants (ferns and mosses) Tier 3 • vertebrate • invertebrates • classification keys	Tier 1 • solids • liquids • gases • heated • cooled Tier 2 • change state • temperature • degrees Celsius (°C) Tier 3 • evaporation • condensation • water cycle	Tier 1 • sound • pitch • volume Tier 2 • vibrating • sound source Tier 3 • sounds travel through a medium • strength of the vibrations	Tier 1 • electricity • wires • switches • bulbs/lamps Tier 2 • electrical circuit • cells/battery • buzzers • complete loop • open and closed circuit Tier 3 • simple series circuit • conductors • insulators	Tier 1 • mouth • tongue • teeth • stomach Tier 2 • digestive system • small and large intestine • carnivores • herbivores • food chains • predators • prey Tier 3 • oesophagus • molars • incisors • canines • producers

Year Five			
Essential Learning			
Living things and their habitats and Animals, including humans	Properties and changes of materials	Earth and space	Force
The Big Question			
Who wants to live forever? What is the circle of life?	How are materials changed from one state to another?	How do the celestial bodies move in our Solar System?	Why do objects fall, slow down and pivot?
I know ... - describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird - describe the life process of reproduction in some plants (sycamore tree and poppy) and animals (chicken and cat) - describe the changes as humans develop to old age.	I can ... - compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets - know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution - use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating - give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic	I can ... - describe the movement of the Earth, and other planets, relative to the Sun in the solar system (the Sun is a star at the centre of our solar system and that it has eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune - Pluto was reclassified as a 'dwarf planet' in 2006) - describe the movement of the Moon relative to the Earth (a moon is a celestial body that orbits a planet (Earth has one moon; Jupiter has four large moons and numerous smaller ones). - describe the Sun, Earth and Moon as approximately spherical bodies - use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	I can ... - explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object - identify the effects of air resistance, water resistance and friction, that act between moving surfaces - recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

	- demonstrate that dissolving, mixing and changes of state are reversible changes - explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda, burning and rusting)		
Assessment Questions			
- Can you draw the life cycle of a mammal, an amphibian, an insect and a bird? - How do poppy plants reproduce? - How do chickens reproduce? - What changes do humans go through as they develop into old age?	- Can you group these everyday materials according to their properties? - What do these terms mean? - dissolve - solution - substance - solution - What is a reversible change? - How can we separate mixtures? - Why do we use different materials for different purposes? I have compared materials in order to make a switch in a circuit. I have observed and compared the irreversible changes that take place when burning different materials or baking bread or cakes.	- How do the Earth, and other planets move, relative to the Sun? - How does the Moon move, relative to the Earth? - How are day and night formed? - Does the sun move across the sky? I have created a simple model of the solar system; I have constructed a simple shadow clocks, calibrated to show midday and the start and end of the school day.	- What is gravity? - What are the different types of resistance that act between moving surfaces? - What mechanisms can help a smaller force to have a greater effect? I have designed and made parachutes and carrying out fair tests to determine which designs are the most effective.

Essential Vocabulary

- Tier 1
- bird
 - insect
- Tier 2
- life cycle
 - mammal
 - amphibian
 - life process
- Tier 3
- reproduction

- Tier 1
- materials
 - solids
 - liquids
 - gases
 - liquid
 - dissolve
 - magnets
 - filtering
 - sieving
 - burning
- Tier 2
- hardness
 - solubility
 - transparency
 - electrical conductivity
 - thermal conductivity
 - solution
 - substance
 - mixtures
 - separation
 - comparative tests
 - fair tests
 - changes of state
- Tier 3
- reversible changes
 - evaporating
 - rusting

- Tier 1
- Sun
 - Earth
 - Moon
 - day
 - night
- Tier 2
- solar system
 - Mercury
 - Venus
 - Mars
 - Jupiter
 - Saturn
 - Uranus
 - Neptune
 - Pluto
 - 'dwarf planet'
- Tier 3
- celestial body

- Tier 1
- force
- Tier 2
- force of gravity
 - air resistance
 - water resistance
 - friction
 - mechanisms
- Tier 3
- levers
 - pulleys
 - gears

Year Six

Essential Learning

Living things and their habitats	Electricity	Evolution and inheritance	Light	Animals including humans
The Big Question				
How do we classify living things?	What happens when we change components in a circuit?	How have living things changed over time?	How does light travel?	What is the circulatory system and how does our lifestyle impact this?
I can ... - describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals - give reasons for classifying plants and animals based on specific characteristics. (classify animals into commonly found invertebrates (such as insects, spiders, snails, worms) and vertebrates (fish, amphibians, reptiles, birds and mammals)).	I can ... - associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit - compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches - use recognised symbols when representing a simple circuit in a diagram.	I can ... - recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago - recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents - identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	I can ... - recognise that light appears to travel in straight lines - use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye - explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes - use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.	I can ... - identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood - recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function - describe the ways in which nutrients and water are transported within animals, including humans.
Assessment Questions				
How can living things be classified into broad groups?	What will make the brightness of a bulb change in a circuit?	What are fossils and what can we learn from them?	- How does light travel? - How can we see objects?	What are the main parts of the human circulatory system?

How can we classify plants and animals based on specific characteristics? I have used classification systems and keys to identify some animals and plants in my immediate environment.	- What could make a buzzer louder in a circuit, or make it stop? - What are the symbols used for the components in a circuit diagram? I have systematically identified the effect of changing one component at a time in a circuit by building and changing the circuit. I have learnt how to represent those circuits in a diagram using recognised symbols.	- What do we know about the offspring of living things? - What is adaptation in plants and animals and can you give examples? - What might this lead to? I have researched and learned about how Charles Darwin developed his ideas on evolution.	Why are shadows the shape they are? I have designed and made a periscope, using the idea that light appears to travel in straight lines. I have explained how it works.	- What are the functions of them? - What impacts the way in which our bodies function? - How are nutrients and water are transported within animals, including humans?
Essential Vocabulary				
Tier 1 - fish - birds Tier 2 - classification - characteristics - invertebrates - amphibians - reptiles - mammals Tier 3 - microorganisms - vertebrates	Tier 1 - lamp - buzzer - cells - volume Tier 2 - circuit - variations - components Tier 3 - voltage - recognised symbols - circuit diagram	Tier 1 - inhabited Tier 2 - adaptation Tier 3 - fossils - evolution	Tier 1 - light - shadows Tier 2 - light sources Tier 3 - reflect light	Tier 1 - heart - blood - water - diet - exercise Tier 2 - circulatory system - blood vessels - nutrients - lifestyle Tier 3 - drugs

Assessment Approach

Cuddington assesses pupils through a combination of practical enquiry, discussion, and written outcomes. Assessment focuses on pupils' ability to recall key scientific knowledge and apply it through working scientifically, asking questions, carrying out investigations, recording observations, and drawing conclusions.

Staff use the progression model to judge how well pupils are developing as scientists, moving from observing and describing in EYFS and KS1 to planning investigations, analysing results, and evaluating evidence in KS2.

Expected Standard: Pupils can independently demonstrate the key knowledge and vocabulary for their year group and apply this through scientific enquiry, reasoning, and explanation.

Skill Area	Reception	KS1 (Year 1–2)	LKS2 (Year 3–4)	UKS2 (Year 5–6)
Observing	Explore and notice the natural world around them	Make simple observations using senses	Make careful observations using equipment	Take precise and accurate observations over time
Questioning	Ask simple questions about what they see	Ask simple scientific questions	Ask relevant and increasingly precise questions	Ask and refine investigable questions
Working Scientifically	Explore through play and investigation	Carry out simple tests with support	Plan and carry out fair tests	Plan and carry out independent investigations controlling variables
Using Equipment	Use simple tools (magnifying glasses, containers)	Use basic equipment safely	Use a range of scientific equipment accurately	Select and use appropriate equipment independently
Recording	Draw pictures and talk about findings	Record using drawings and simple charts	Record results using tables and diagrams	Record using graphs, tables, and scientific diagrams
Interpreting Results	Talk about what they notice	Identify simple patterns and differences	Interpret results and identify patterns	Analyse results, draw conclusions, and explain findings
Scientific Knowledge	Talk about plants, animals, and changes	Learn basic science knowledge (plants, materials, animals)	Apply knowledge across biology, chemistry, physics	Link and apply scientific concepts across topics
Vocabulary	Use simple words (plant, animal, weather)	Use subject vocabulary accurately	Use a wider range of scientific vocabulary	Use precise scientific language to explain and justify